IN THE CLAIMS:

Please cancel claims 34-42 without prejudice or disclaimer.

Claims 1-21 (Cancelled)

Claim 22 (Withdrawn): A method for producing composite materials, such as thermoplastic resins with mineral and/or vegetable fillers, characterized in that it consists in feeding a mineral and/or vegetable filler, preheating said filler, feeding a melted thermoplastic resin onto said filler, introducing the mixture of said filler and said thermoplastic resin in an extruder, subjecting the mixture to high compression, producing a high partial vacuum, and compressing the mixture in an extrusion head, out of which the material to be subjected to subsequent treatments flows.

Claim 23 (Withdrawn): The method according to claim 22, characterized in that said mineral and/or vegetable filler is heated to a temperature from 20 to 160°.

Claim 24 (Withdrawn): The method according to claim 22, characterized in that said resin is present in a percentage from 25 to 70% of the material being obtained and said filler is present in a percentage from 75 to 30%.

Claim 25 (Withdrawn): The method according to claim 22, characterized in that degassing is performed during the high compression step.

Claim 26 (Withdrawn): The method according to claim 22, characterized in that said thermoplastic resin mixed with said filler is introduced in a mixer that is adapted to increase the exposed surface of said mixture for degassing and wetting the filler.

Claim 27 (Withdrawn): The method according to claim 22, characterized in that a second degassing is performed when said high partial vacuum step is performed.

Claim 28 (Withdrawn): The method according to claim 22, characterized in that it provides for the introduction of processing waste in a maximum quantity of 30%.

Claim 29 (Withdrawn): The method according to claim 22, characterized in that said filler is formed by powder or fibers.

Claim 30 (Withdrawn): The method according to claim 29, characterized in that said fibers of said filler have a length from 3 to 20 mm.

Claim 31 (Withdrawn): The method according to claim 22, characterized in that said extrusion screw, in the step for melting the thermoplastic resin, has an axial extension of substantially 20 diameters, and the second compression and partial vacuum portion has a length of substantially 14 diameters including the end portion for final extrusion.

Claim 32 (Withdrawn): The method according to claim 22, characterized in that said thermoplastic resin is fed by means of an extrusion screw that is provided in axial alignment with the extruder, at least part of said melted thermoplastic resin being introduced in said filler before introduction in said extruder, the remaining part being introduced in said extruder.

Claim 33 (Withdrawn): The method according to claim 22, characterized in that said melted thermoplastic resin is fed by an extrusion screw that is separate with respect to the extrusion screw for processing the mixture of thermoplastic resin and filler.

Claims 34-42 (Cancelled)

Claim 43 (New) An apparatus for producing composite materials said apparatus comprising

a substantially cylindrical body having an inner chamber extending from a feeder of a thermoplastic resin to an extrusion head, with a feeder of at least one of mineral and vegetable fillers arranged between said feeder of thermoplastic resin and said extrusion head,

an extrusion screw rotatably disposed inside the substantially cylindrical body to define a first portion of said inner chamber arranged downstream of the feeder of thermoplastic resin for plasticizing and melting said thermoplastic resin and a second portion of said inner chamber arranged downstream of said first portion, where the feeder of at least one of the mineral and the vegetable fillers debouches, and

an injection channel between the first portion of the inner chamber and an end portion of the feeder of the at least one of the mineral and the vegetable fillers upstream of debouchment of the feeder of the at least one of the mineral and the vegetable fillers into the second portion of the inner chamber for mixing the fillers

and melted thermoplastic resin before introduction into the second portion of the inner chamber.

Claim 44 (new): The apparatus according to claim 43, wherein said second portion of the inner chamber forms a high compression region, followed by a vacuum region.

Claim 45 (new): The apparatus according to claim 44, wherein between said high compression region and said vacuum region a mixer is present, designed to increase the exposed surface of the mixture of fillers and melted thermoplastic resin.

Claim 46 (new): The apparatus according to claim 45, wherein said mixer has a plurality of channels that are arranged substantially parallel to an axial direction and form a reduced cross-section with respect to a useful upstream cross-section for feeding the material.

Claim 47 (new): The apparatus according to claim 43, further comprising an auxiliary inlet for introducing a second thermoplastic resin.

Claim 48 (new): The apparatus according to claim 43, further comprising, at an outlet of said extrusion head, a profile head for obtaining finished articles.

Claim 49 (new): The apparatus according to claim 43, further comprising, at an outlet of said extrusion head, a sheet head, downstream of which calendering rollers are arranged.

Claim 50 (new): The apparatus according to claim 43, further comprising, downstream of said extrusion head, a press with molds for forming manufactured articles.

Claim 51 (new): The apparatus according to claim 43, further comprising a spaghetti head for producing granules.